NJ J002 325 074

LENOX

April 21, 1993

Regional Administrator
United States Environmental Protection Agency
Region II
26 Federal Plaza
New York, New York 10278

Re: NJPDES-DGW Permit No. NJ0070343
Lenox China, A Division of Lenox, Inc.
Tilton Road, Atlantic County, Pomona, NJ 08240 and

USEPA HSWA Permit
Lenox China, A Division of Lenox, Inc.
Tilton Road, Atlantic County, Pomona, NJ 08240
EPA I.D.: NJD002325074

Revisions to the RCRA Facility Investigation Task I Report

Gentlemen:

In accordance with the collective New Jersey Department of Environmental Protection and Energy (NJDEPE) and U.S. Environmental Protection Agency (EPA) comment letter of March 18, 1993 to Mr. Stephen F. Lichtenstein, which was received via fax on March 19, 1993, Lenox China has modified the RCRA Facility Investigation (RFI) Task I Report (Facility Background Report). These revisions which follow your comment numbering system are presented below:

(1) The site and location maps have been revised in accordance with your comments.

(2) The location map has been revised per your comments. Lenox is aware that they must submit to the NJDEPE copies of all legal agreements made with adjacent property owners with regard to off-site irrigation. This agreement is currently being finalized and Lenox intends to make it available to the NJDEPE when available.

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LENOX TECHNICAL CENTER, 65 FIRE ROAD, ABSECON, NJ 08201 FAX 609-484-9520

(3) The site map has been revised per your comments.

(4) The status of groundwater monitoring and remediation currently in progress has been detailed in Section 1.A. on Page 3. Further, by letter dated April 15, 1993 to Mr. Faranca, the well installation plans and schedule for the proposed wells along the White Horse Pike have been detailed.

(5) Historic plans of the facility are shown on Figure 3.

(6) A quantitative site water budget is presented as Appendix J.

(7) To the extent that releases are known, the location, volume and date of the release are presented in each description of solid waste management unit (SWMU).

(8) Lenox understands that the RFI Work Plan and RFI Report must be stand alone documents and that references to previously submitted documents will not be allowed. The statements that previous investigations "satisfy the full RFI requirements" have been modified to present the fact that these statements are the belief of Lenox.

(9) With regard to SWMU No. 1, Figures 4 and 5 present drawings of the design, construction, storage capacity and physical dimensions of the former and current Degreaser Sludge Pits, respectively.

(10) With regard to SWMU No. 2, as agreed to, all future samples taken for metal analysis from Well MW-10 will include unfiltered samples.

(11) With regard to SWMU No. 5, as agreed to, all future samples taken for metal analysis from Well MW-8 will include unfiltered samples.

(12) With regard to SWMU No. 6, as agreed to, two additional rounds of samples taken for metal analysis from Wells MW-9 and MW-15 will be unfiltered to demonstrate that no impact to groundwater has occurred.

(13) With regard to SWMU No. 7, as agreed to, two additional rounds of samples taken for metal analysis from Well MW-4 will be unfiltered to demonstrate that no impact to groundwater has occurred.

(14) With regard to SWMU No. 8, as agreed to, two additional rounds of samples taken for metal analysis from Wells MW-4 and MW-6 will be unfiltered to demonstrate that no impact to groundwater has occurred.

(15) With regard to SWMU No. 10, Glaze Basin, the text has been modified to include the volume removed, 1,200 cubic yards, and to detail the fact that a small amount of waste remains along the bottom and north side walls.

(16) With regard to SWMU No. 12, Drum Storage Area, the text has been modified to clarify that no soils were removed.

(17) With regard to SWMU No. 13, the Area of Concern (AOC), the physical dimensions, both horizontally and vertically, are detailed in Item No. 2 of the "Supplemental Information, Solid Waste Management Unit, Lenox China, Pomona, New Jersey" dated September, 1990, Item No. 2. The text of the report has been modified to estimate the volume of waste in this AOC.

The above revisions are incorporated in the attached pages of the RFI Task I Report. In order to update your copy of this Report, please replace all text with the attached text, replace Figures 1 and 2, add Figures 3, 4, and 5 and add Appendix J. To aid you in your review of these revisions, a redlined copy of the text is attached.

Should you have any questions concerning the above, please do not hesitate to contact me.

Sincerely,

John F. Kinkela

John F. Kinkela
Director of Environmental Engineering

Enclosures

cc w/encls: Two additional copies to Mr. Frank Faranca

Mr. Andrew Park
United States Environmental Protection Agency
Air and Waste Management Division
Hazardous Waste Facilities Branch
Region II
26 Federal Plaza
New York, New York 10278

United States Environmental Protection Agency
Office of Policy and Management
Permits Administration Branch
Region II
26 Federal Plaza
New York, New York 10278

FACILITY BACKGROUND REPORT

RCRA FACILITY INVESTIGATION TASK I REPORT

FEBRUARY, 1993

REVISED APRIL, 1993

LENOX CHINA
A DIVISION OF LENOX, INC.
TILTON ROAD
ATLANTIC COUNTY
POMONA, NJ 08240

NJPDES-DGW PERMIT NO. NJ0070343

USEPA HSWA PERMIT - EPA I.D.: NJD002325074

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FACILITY BACKGROUND REPORT
RCRA FACILITY INVESTIGATION TASK I REPORT

LENOX CHINA
A DIVISION OF LENOX, INC.
TILTON ROAD
ATLANTIC COUNTY
POMONA, NJ 08240

NJPDES-DGW PERMIT NO. NJ0070343

USEPA HSWA PERMIT - EPA I.D.: NJD002325074

Purpose Of The Report

The purpose of this report is to jointly satisfy the requirements for a Facility Background Report as required by the New Jersey Department of Environmental Protection and Energy (NJDEPE) NJPDES-DGW Permit No. NJ0070343 and for many elements of a RCRA Facility Investigation (RFI) as required by the United States Environmental Protection Agency (EPA) HSWA Permit for EPA I.D.: NJD002325074. This report describes in detail fourteen Solid Waste Management Units (SWMU's), and one Area of Concern (AOC) set forth in the permits, including their history and current status, and further details the remaining submittals to both the NJDEPE and the EPA in order to complete the requirements for an RFI for each SWMU as expressed in the two permits. The numbering of the SWMU's and AOC follows the HSWA Permit.

Total Site History

The Lenox China manufacturing facility located in Galloway Township, Atlantic County, New Jersey (Lenox) is a modern, slab on grade, single-story structure located on 56 acres of level land in a light industrial, rural area as shown on Figure 1 ~~(a topographic map taken from a USGS quadrangle with a contour interval of ten feet and a scale of one inch equals four hundred feet depicting all waterways, wetlands, flood plains, known drainage patterns, surface water containment areas, property lines, production wells, public and private potable wells within a half-mile radius of the site)~~. Directly across the street from Lenox is an almost completed golf course and future planned residential development. Figure 2 shows ~~the location of the SWMU's and the AOC identified in the Permits, surrounding land uses, property lines with present owners of~~

~~all adjacent property indicated and locations of all monitoring wells.~~details of the site. Figure 3 presents the historic development of the Lenox facility.

This manufacturing facility was placed into operation in 1954 and initially had 145,000 square feet of manufacturing area and 8,000 square feet of office space. Additions to the facility were made in 1964, 1968 and 1979 and, at the present time, the manufacturing facility has a total of 346,000 square feet and an office encompassing 23,000 square feet. In addition, separate warehouses and other miscellaneous buildings have a total of 45,000 square feet. Operations at the facility include the manufacture of fine china giftware, tableware and hollowware. The facility employs approximately 1,100 people and is served by public sewer, gas and electric. Water is supplied to the plant by two on-site wells. Treated industrial wastewater is discharged both directly to a receiving stream, a ditch which discharges into the Jack Pudding Branch of the Babcock Swamp, and to the Atlantic County Utilities Authority (ACUA) sanitary system. A quantitative site water budget is presented in Appendix J.

The manufacture of china includes the preparation of a clay body utilizing various clay components that are shipped into the plant by rail and truck. The clay is mechanically processed in a water solution (slip) and dewatered by filter pressing or placing the slip in plaster molds. The first firing of the formed pieces is accomplished in bisque kilns. After this initial firing, the china is coated with glaze and fired again in a glost kiln. Decorations are then applied using decals, precious metal paints, mechanical etching or acid etching prior to final firing in decorating lehrs. Quality inspections take place during the manufacturing process. Final inspection and packing precedes shipping to customers.

The primary hazardous materials used in the manufacturing process are lead utilized as a major component of glaze and trichloroethylene (TCE) utilized in the acid etching process. The lead is purchased as a fritted lead compound (glass-encased lead).

Specific Information Concerning SWMU's

1. Degreaser Sludge Pit

A. History

The degreaser sludge pit was installed in 1964 to receive degreaser sludges generated when the process of acid etching china was installed at this facility. This process involves the selective covering of china with a wax and asphaltic coating that serves as a mask prior to

immersing the china in a hydrofluoric/sulfuric acid mixture. The parts of the china that are not coated become acid etched. After neutralization of the acid in a caustic soda solution (with all wastewaters produced by neutralization directed to the central industrial wastewater treatment system), the wax and asphaltic coating is removed in a TCE solvent vapor degreasing unit equipped with refrigerated vapor condensing coils. When sludge builds up in this unit, it is transferred to drums in the degreaser sludge pit. When the drums are full, they are transferred to the drum storage area prior to being shipped off-site for ultimate treatment/disposal.

From 1964 to 1979, the degreaser sludge pit was situated outside of the manufacturing building prior to plant expansion as shown on Figure 2. Its current location since 1979 is also shown on Figure 2. Present plans are to eliminate the entire acid etching process and to decommission the TCE degreaser by July, 1993. Figure 4 presents the design, construction, storage capacity and physical dimensions of the former degreaser sludge pit and Figure 5 presents the same information on the currently utilized degreaser sludge pit.

In July, 1986, Lenox, during routine monitoring of monitoring wells located on the property, detected TCE in Well No. 10. Notification of this detection was made to the NJDEPE and assessment of the source of this contamination commenced almost immediately. Since that time, studies were conducted and monitoring points installed which determined that there were two sources that caused TCE to be released. These two sources are the initial degreaser sludge pit and the antecedent drum storage area, SWMU No. 12. It is estimated that the release to groundwater from the initial degreaser sludge pit was less than 100 pounds based upon groundwater concentrations of TCE in the plume and occurred within the period from installation in 1964 to deactivation in 1979.

In January, 1992, a remediation system was installed that encompasses a pumping well network downgradient of the two sources of release, a treatment system composed of two granular activated carbon towers operated in series and an infiltration gallery located upgradient of the extraction wells and sources as shown on Figure 2. This remediation system is currently in operation and monitoring of its performance as well as a series of monitoring wells is ongoing. The quarterly results which are submitted to the NJDEPE on system performance indicate the system is performing as designed in that the plume concentrations of TCE are being reduced and properly treated.

B. Prior Submittals

Investigations approved by the NJDEPE and conducted by Lenox concluded that TCE had been released from the initial degreaser sludge pit (operated prior to 1979) and the antecedent drum storage area (operated prior to 1984). Neither ~~Both~~ of these sources remain ~~are no longer~~ in existence. Detailed studies of the soils and groundwater affected by these TCE releases have been undertaken and have been incorporated in the design of a groundwater remediation system. Both EPA and NJDEPE have approved these reports and specifications of the remediation system which became operable in January, 1992. These reports and specifications are entitled "Groundwater Remediation Design Report" dated August 1990, "Addendum To August 1990 Groundwater Remediation Design Report," dated October 1991, "Groundwater Recharge Pilot Study Report, Lenox China Facility, Pomona, New Jersey" dated August 1991, and "Technical Specifications, Groundwater Remediation System," dated September 1991. In addition, by letter of December 10, 1992, a report entitled "Groundwater Corrective Action System Semi-Annual Report January-June 1992" was submitted to EPA and NJDEPE. This report details the results accomplished by the system.

C. Further Investigations and Corrective Actions

Lenox believes these previously submitted reports completely satisfy the requirement for a full RFI as required by Module III A.3.ii, Page III-5 of the EPA HSWA Permit and Appendix B of the NJPDES-DGW Permit. In addition, the requirement of Part VI-DGW, Page 5 of 7 of the NJPDES-DGW Permit, which requires soil sampling of this SWMU has already been performed, and the results of the sampling are contained within the August, 1990 above-referenced report. Consequently, Lenox believes, no further investigations are required and the corrective actions currently underway are sufficient to remediate the results of any release from this SWMU.

2. Sludge Disposal Area

A. History and Prior Submittals

Lenox submitted to both the EPA and NJDEPE a detailed report entitled "Supplemental Information, Solid Waste Management Units, Lenox China, Pomona, New Jersey" dated September, 1990 that provided historical information, waste characterization and delineation of the former sludge disposal area that is adjacent to the now closed Slip Basin, a RCRA controlled SWMU. Information contained in this report, specifically Item No. 2, the "Summary Data

Report For Sludge Disposal Area" dated July, 1990, prepared by Geraghty & Miller, Inc., details information collected on this SWMU and specific analytical data for lead in groundwater, which is the contaminant of concern.

B. Additional Information

As stated in the July, 1990 Geraghty & Miller report, the sludge disposal area, the location of which is shown on Figure 2, is completely covered by a bituminous concrete parking lot. The parking lot was constructed in 1979 and the sludge was placed in this area within the period from 1966 to 1979. The depth of sludge in this area has not been determined, although Lenox believes the depth to be an average of less than six inches due to the fact that only small amounts of sludge were released during slip basin dike construction. This parking lot is regularly inspected by Lenox personnel at least monthly to insure the concrete has not been breached. When cracks in the concrete are found, sealing of the concrete is immediately undertaken. Inspection logs of this area are contained in Appendix A.

As shown on Figure 2, Well MW-10 is immediately adjacent and downgradient hydrogeologically to the sludge disposal area. Detailed hydrogeologic studies of the plant property were performed in connection with the TCE remediation project that is detailed in the previously submitted and approved "Groundwater Remediation Design Report" dated August 1990, and "Addendum To August 1990 Groundwater Remediation Design Report" dated October 1991. Well MW-10 has been sampled since July, 1986 and Lenox believes the analytical data from this sampling program has demonstrated that lead has not been released to the groundwater. A summary of water quality data for Well MW-10 is contained in Appendix A.

Although this water quality data was obtained from samples of groundwater which were filtered prior to analysis, as opposed to unfiltered samples, Lenox believes the groundwater quality has not been impacted by leaded materials in the sludge disposal area.

~~The reasons the groundwater quality has not been impacted by leaded materials in the sludge disposal area are that~~ The lead is in a relatively insoluble glass matrix and ~~that~~ any leaded materials are above the groundwater elevation in this area. Supporting this statement is the method by which leaded materials were placed in the sludge disposal area. That is, leaded materials were inadvertently placed on the ground surface when the former Slip Basin was expanded as detailed in the July, 1990 Geraghty

& Miller report. These leaded materials originated from the glaze which is purchased and used as a lead fritted material. That is, the lead is placed in a glass matrix which is relatively insoluble, and experience with all monitoring wells on the property has shown this lead has not impacted groundwater.

C. Further Investigations And Corrective Actions

Lenox believes the above-described reports ~~completely~~ satisfy the requirement for a full RFI as required by Module III A.3.ii, Page III-5 of the EPA HSWA Permit and Appendix B of the NJPDES-DGW Permit although additional groundwater analysis of samples collected from MW-10 must be performed on unfiltered samples to confirm this belief. Lenox believes the paving of this area coupled with regular periodic inspections of pavement integrity are sufficient corrective actions to insure containment of this leaded material in this SWMU.

3. Waste Pile

A. History and Prior Submittals

Lenox submitted to both the EPA and NJDEPE a detailed report entitled "Supplemental Information, Solid Waste Management Units, Lenox China, Pomona, New Jersey" dated September, 1990 that provided historical information and a work plan for further waste characterization and delineation of the waste pile which is contained in the former west wall of the Glaze Basin, a RCRA regulated SWMU that was closed in 1990. Information contained in this report, specifically Item No. 4, the "RCRA Facility Investigation Work Plan, Glaze Seam In West Wall Of Former Glaze Basin, Lenox China, Pomona, New Jersey, EPA ID. No. NJD 002 325 074" dated July 1990, prepared by Geraghty & Miller, Inc., details information collected on this SWMU at that time and a Work Plan to develop further information needed to complete the RFI.

B. Additional Information

The Work Plan described above was performed and the results of the investigation are presented in the report entitled "Delineation of the Glaze Seam in West Wall of Former Glaze Basin, Lenox China, Pomona, New Jersey, EPA ID. No. NJD 002 325 074" dated April 1992, prepared by Geraghty & Miller, Inc. that is contained in Appendix B, attached separately. This report indicates that the waste pile is a result of the existence of a former glaze basin which was operated from 1953 to 1964 and indicates that the volume of waste is 45 cubic yards. Appendix B

contains analytical results from groundwater sampling of Well MW-3 which is the immediate downgradient monitoring point from the waste pile as shown on Figure 2.

Detailed hydrogeologic studies of the plant property were performed in connection with the TCE remediation project that is detailed in the previously submitted and approved "Groundwater Remediation Design Report" dated August 1990, and "Addendum To August 1990 Groundwater Remediation Design Report" dated October 1991. Well MW-3 has been sampled since November 1982 and since the closure of the Glaze Basin in 1990 (the Basin contents were removed and the area capped with bituminous concrete) the analytical results of this sampling demonstrated that lead has not been released to the groundwater above drinking water levels. Zinc levels in the groundwater which were determined from filtered samples were noted in 1988 through 1990 above expected background concentrations. Zinc was and is utilized in glaze formulations and the zinc levels detected in groundwater are the result of zinc contained in this waste pile.

The NJPDES-DGW Permit requires zinc to be monitored in the groundwater from Well MW-3. Groundwater samples will be analyzed from both filtered and unfiltered samples. As this entire area covering the waste pile was capped in 1990 and is regularly inspected and maintained, zinc concentrations will decline over time.

C. Further Investigations and Corrective Actions

Lenox believes the above-described reports completely satisfy the requirement for a full RFI as required by Module III A.3.ii, Page III-5 of the EPA HSWA Permit and Appendix B of the NJPDES-DGW Permit. Soil investigations that are required by Part VI-DGW, Page 5 of 7, of the NJPDES-DGW Permit have been performed and are detailed in the above-referenced report in Appendix B. The paving of this area coupled with regular periodic inspections and maintenance of pavement integrity are sufficient corrective actions to insure containment of the lead and zinc. Groundwater sampling of Well MW-3 as required under the NJPDES-DGW Permit will continue to substantiate the effectiveness of this corrective action.

4. Polishing Basin

A. History

This SWMU is variously referred to in the Permits as the Polishing Lagoon or Polishing Basin. Since Lenox has always referred to it as the Polishing Basin, that term

will be used in this Report. The Polishing Basin was constructed in 1970 as part of the central industrial wastewater treatment system. Its location is shown on Figure 2. It was rectangular and measured approximately 60 feet by 90 feet with an average depth of 6 feet. The estimated capacity was 110,000 gallons. The Polishing Basin was removed from service in June, 1992 and is currently undergoing closure under an approved closure plan. The "Polishing Basin Closure/Post-Closure Plan, Lenox China, Pomona, New Jersey" dated June, 1992/Revised July, 1992, prepared by Eder Associates Consulting Engineers, P.C. was approved by the NJDEPE on August 26, 1992. A copy of this approved plan is contained in Appendix C.

The use of the Glaze Basin was eliminated when the Polishing Basin was placed in service in 1970, and the Polishing Basin received wastewaters from the central industrial wastewater clarifier which was installed at the same time. The Polishing Basin received this clarified wastewater which contained all plant industrial wastes with the exception of sanitary sewage which was treated in a separate facility. The Polishing Basin was the final step in the treatment process and provided final clarification prior to discharge. In 1987, the facility began pretreating wastewaters containing lead in a new leaded wastewater treatment facility prior to being discharged to the central industrial wastewater treatment system. Also in 1987, the Slip Basin was taken out of service. In 1991, the discharge from the leaded wastewater treatment facility was directed to the ACUA sanitary system and thereby removed from the central industrial wastewater treatment plant influent.

Samples of the sludge in the Polishing Basin were taken from 1984 to 1987 as required by the NJPDES-DSW Permit. The results of these samples showed the sludge not to be a hazardous waste. These results are contained in Appendix C.

At the present time, the Polishing Basin is undergoing closure in accordance with the approved Closure Plan. Sludge with any impacted soil is in the process of being removed from the Basin and temporarily stored as provided in the Closure Plan. Options for permanent disposal are being explored. Samples of the sludge for disposal have been tested in accordance with procedures outlined in the "Polishing Basin Sludge Sampling Plan (Revised)" dated January 11, 1993, prepared by Eder Associates Consulting Engineers, P.C. The Plan and the results are presented in Appendix C. The results show the sludge to be a non-hazardous waste.

B. Prior Submittals and Additional Information

As shown on Figure 2, Well MW-7 is immediately adjacent and downgradient hydrogeologically to the Polishing Basin. Detailed hydrogeologic studies of the plant property were performed in connection with the TCE remediation project that is detailed in the previously submitted and approved "Groundwater Remediation Design Report" dated August 1990, and "Addendum To August 1990 Groundwater Remediation Design Report" dated October 1991. Well MW-7 has been sampled since December, 1983 and the analytical data from this sampling program on filtered samples, Lenox believes, demonstrate that this SWMU has not caused releases of hazardous substances to the groundwater. A summary of water quality data for Well MW-7 is contained in Appendix C.

C. Further Investigations and Corrective Actions

Lenox believes the above-referenced reports and the information incorporated in Appendix C satisfy the requirement for a First Phase RFI as required by Module III A.3.i, Page III-4 of the EPA HSWA Permit, and demonstrate that a release has not occurred from this SWMU. Consequently, a full RFI or any other further action other than complete closure in accordance with the approved plan is not necessary. The soil sampling and analysis program that is required under the approved closure plan will satisfy the requirements for a soil investigation denoted in Part VI-DGW, Page 5 of 7, of the NJPDES-DGW Permit and at least two rounds of unfiltered groundwater samples of Well MW-7 will be obtained for analysis to confirm the Lenox belief that a groundwater release has not occurred from this SWMU.

5. Tilton Road Pond

A. History

The Tilton Road Pond was constructed as part of the original plant in 1954. It served initially as an erosion and sedimentation control pond during construction activities and, upon plant start-up in 1954, received non-contact cooling waters, treated sanitary wastewaters and stormwater. The Tilton Road Pond has an approximate capacity of 125,000 gallons and discharges through three parallel culverts which run under Tilton Road and into a stormwater ditch. The ditch discharges into the Jack Pudding Branch of the Babcock Swamp.

In 1970, when the central industrial wastewater treatment plant was completed and the Polishing Basin was installed,

the Basin discharge was directed to the Tilton Road Pond. In 1987, the treated sanitary wastewater was directed to the ACUA sanitary system and no longer went into the Tilton Road Pond. In August 1992, the central industrial wastewater treatment plant discharge was diverted from the Tilton Road Pond influent to a new discharge structure at the outlet of the Tilton Road Pond. This discharge structure prevents treated industrial wastes from entering the Tilton Road Pond.

B. Prior Submittals and Additional Information

As shown on Figure 2, Well MW-8 is immediately adjacent and downgradient hydrogeologically to the Tilton Road Pond. Detailed hydrogeologic studies of the plant property were performed in connection with the TCE remediation project that is detailed in the previously submitted and approved "Groundwater Remediation Design Report" dated August 1990, and "Addendum To August 1990 Groundwater Remediation Design Report" dated October 1991. Well MW-8 has been sampled since December 1983 and the analytical data from this sampling program on filtered samples, Lenox believes, demonstrate that this SWMU has not caused releases of hazardous substances to the groundwater. A summary of water quality data for Well MW-8 is contained in Appendix D. In addition, sampling of the water contained in the Tilton Road Pond has regularly been conducted under the previous NJPDES-DGW Permit. The results of this sampling are summarized in Appendix D. Also included in Appendix D are analytical data on the sludge in the Tilton Road Pond that was obtained from samples collected in April, 1985.

C. Further Investigations and Corrective Actions

Lenox believes the above-referenced reports and the information incorporated in Appendix D satisfy the requirement for a First Phase RFI as required by Module III A.3.i, Page III-4 of the EPA HSWA Permit, and demonstrate that a release has not occurred from this SWMU. In accordance with Part VI-DGW, Page 5 of 7 of the NJPDES-DGW Permit, the only additional information required is to obtain sediment samples of the Tilton Road Pond. The RFI work plan will detail the scope of the soil sampling for this SWMU and at least two rounds of unfiltered groundwater samples of Well MW-8 will be obtained for analysis to confirm the Lenox belief that a groundwater release has not occurred from this SWMU.

6. Underground Effluent Transfer Pipe

A. History

A four-inch steel pipe installed in 1964 ran underground from the Glaze Basin to the Slip Basin, a distance of approximately 200 feet and is shown on Figure 2. This pipe transferred overflow from the Glaze Basin to the Slip Basin. Consequently, the contaminants of concern would be the constituents of glaze. When the Glaze Basin was removed from service in 1970, this pipe was no longer used. In 1984, a concrete drum storage pad was constructed over a portion of this pipe.

B. Prior Submittals

Lenox submitted to both the EPA and NJDEPE a detailed report entitled "Supplemental Information, Solid Waste Management Units, Lenox China, Pomona, New Jersey" dated September, 1990 that provided construction and closure information for this SWMU. Information contained in this report, specifically Item No. 5, entitled "Piping" by Eder Associates Consulting Engineers, P.C., details information collected at that time on this SWMU. This information reveals that the portion of the pipe that was removed (approximately 80 feet) was in good condition with no apparent holes or leaks. Further, there was no visual evidence of any release to the surrounding soils. The pipe that remains in the ground at a depth of six inches, which is above the groundwater table, is covered by concrete and has been plugged.

C. Additional Information

As shown on Figure 2, Wells MW-9 and MW-15 are immediately downgradient hydrogeologically to the Underground Effluent Transfer Pipe. Detailed hydrogeologic studies of the plant property were performed in connection with the TCE remediation project that is detailed in the previously submitted and approved "Groundwater Remediation Design Report" dated August 1990, and "Addendum To August 1990 Groundwater Remediation Design Report" dated October 1991. Well MW-9 has been sampled since July, 1986, and Well MW-15 has been sampled since November, 1990. The analytical data from the sampling programs on filtered samples, Lenox believes, demonstrate that this SWMU has not caused releases of hazardous substances to the groundwater. Summaries of water quality data for Wells MW-9 and MW-15 are contained in Appendix E.

D. Further Investigations and Corrective Actions

The above-referenced reports and the information incorporated in Appendix E satisfy the requirement for a First Phase RFI as required by Module III A.3.i, Page III-4 of the EPA HSWA Permit, and demonstrate that a release has not occurred from this SWMU. In accordance with Part VI-DGW, Page 5 of 7 of the NJPDES-DGW Permit, the only additional information required is to obtain soil samples adjacent to the Underground Effluent Transfer Pipe. The RFI work plan will detail the scope of the soil sampling for this SWMU and at least two rounds of unfiltered groundwater samples of Wells MW-9 and MW-15 will be obtained for analysis to confirm the Lenox belief that a groundwater release has not occurred from this SWMU.

7. Equalization Sump

A. History and Prior Submittals

Lenox submitted to both the EPA and NJDEPE a detailed report entitled "Supplemental Information, Solid Waste Management Units, Lenox China, Pomona, New Jersey" dated September, 1990 that provided historical, construction and closure information for this SWMU. Information contained in this report, specifically Item No. 6, entitled "Equalization Sump" by Eder Associates Consulting Engineers, P.C., details information collected at that time on this SWMU. This information reveals that the equalization sump and associated piping which were removed were in good condition with no apparent holes or leaks. Further, there was no evidence of any release to the surrounding soils.

B. Additional Information

As shown on Figure 2, Well MW-4 is downgradient hydrogeologically to the Equalization Sump and associated piping. Detailed hydrogeologic studies of the plant property were performed in connection with the TCE remediation project that is detailed in the previously submitted and approved "Groundwater Remediation Design Report" dated August 1990, and "Addendum To August 1990 Groundwater Remediation Design Report" dated October 1991. Well MW-4 has been sampled since November, 1982. The analytical data from this sampling program on filtered samples, Lenox believes, demonstrate that this SWMU has not caused releases of hazardous substances to the groundwater. A summary of water quality data for Well MW-4 is contained in Appendix F.

C. Further Investigations and Corrective Actions

Lenox believes the above-referenced reports and the information incorporated in Appendix F satisfy the requirement for a First Phase RFI as required by Module III A.3.i, Page III-4 of the EPA HSWA Permit, and demonstrate that a release has not occurred from this SWMU. In accordance with Part VI-DGW, Page 5 of 7 of the NJPDES-DGW Permit, the only additional information required is to obtain soil samples of the area where the Equalization Sump and associated piping were located. The RFI work plan will detail the scope of the soil sampling for this SWMU and at least two rounds of unfiltered groundwater samples of Well MW-4 will be obtained for analysis to confirm the Lenox belief that a groundwater release has not occurred from this SWMU.

8. Wastewater Treatment Piping

A. History and Prior Submittals

Lenox submitted to both the EPA and NJDEPE a detailed report entitled "Supplemental Information, Solid Waste Management Units, Lenox China, Pomona, New Jersey" dated September, 1990 that provided historical, construction and closure information for this SWMU. Information contained in this report, specifically Item No. 6, entitled "Equalization Sump" by Eder Associates Consulting Engineers, P.C., details information collected at that time on this SWMU. This information reveals that the piping that was removed was in good condition with no apparent holes or leaks. Further, there was no evidence of any release to the surrounding soils.

B. Additional Information

As shown on Figure 2, Wells MW-4 and MW-6 are downgradient hydrogeologically of the piping associated with the wastewater treatment facility. Detailed hydrogeologic studies of the plant property were performed in connection with the TCE remediation project that is detailed in the previously submitted and approved "Groundwater Remediation Design Report" dated August 1990, and "Addendum To August 1990 Groundwater Remediation Design Report" dated October 1991. Well MW-4 has been sampled since November, 1982 and Well MW-6 has been sampled since December, 1983. The analytical data from these sampling programs on filtered samples, Lenox believes, demonstrate that this SWMU has not caused releases of hazardous substances to the groundwater. A summary of water quality data for Well MW-4 is contained in Appendix F and a summary of water quality data for Well MW-6 is contained in Appendix G.

C. Further Investigations and Corrective Actions

Lenox believes the above-referenced reports and the information incorporated in Appendices F and G satisfy the requirement for a First Phase RFI as required by Module III A.3.i, Page III-4 of the EPA HSWA Permit, and demonstrate that a release has not occurred from this SWMU. In accordance with Part VI-DGW, Page 5 of 7 of the NJPDES-DGW Permit, the only additional information required is to obtain soil samples of the area where piping associated with the wastewater treatment facility was and is located. The RFI work plan will detail the scope of the soil sampling for this SWMU and at least two rounds of unfiltered groundwater samples of Wells MW-4 and MW-6 will be obtained for analysis to confirm the Lenox belief that a groundwater release has not occurred from this SWMU.

9. Underground Storage Tanks

A. History

Two underground storage tanks, located behind the main manufacturing building, were removed in July 1987. They included an 8,200 gallon capacity tank with No. 2 or No. 4 heating oil and a 2,000 gallon tank containing unleaded gasoline. Both tanks were removed and clean closed in accordance with NJDEPE regulations. The tanks are no longer designated as SWMU's by the NJPDES-DGW Permit but are listed as a SWMU by the EPA HSWA Permit.

B. Further Investigations and Corrective Actions

No further actions or investigations are required by either the NJPDES-DGW or EPA HSWA Permit. However, the EPA HSWA Permit requires that, if new information is obtained that shows contamination associated with this SWMU, additional action will be required.

10. Glaze Basin

A. History

The Glaze Basin is a RCRA regulated unit which was closed in July, 1990 in accordance with applicable regulations and closure certification was submitted. Closure encompassed removal of approximately 1,200 cubic yards of waste that was contained in the basin and transfer of this waste to a proper commercial facility for recycle. A small amount of waste remains along the bottom and north side wall which could not be removed due to the problems with structural stability of the adjacent building. It is estimated that less than one cubic yard of waste mixed

with soil remains in the former Glaze Basin. This SWMU ~~It~~ is currently in post-closure care including monitoring.

B. Further Investigations and Corrective Actions

No further investigations or corrective actions are required for this SWMU except as designated in Part IX-DGW, Page 1 of 2 entitled "Special Conditions For Post-Closure of the RCRA Regulated Lagoons" of the NJPDES-DGW Permit. In accordance with Module III A.3.iii, Page III-5 of the EPA HSWA Permit, EPA will be copied on all submissions of groundwater data required by the NJPDES-DGW Permit.

11. Slip Basin

A. History

The Slip Basin is a RCRA regulated unit which was closed in September, 1990 in accordance with applicable regulations and closure certification was submitted. It is currently in post-closure care including monitoring.

B. Further Investigations and Corrective Actions

No further investigations or corrective actions are required for this SWMU except as designated in Part IX-DGW, Page 2 of 2 entitled "Special Conditions For Post-Closure of the RCRA Regulated Lagoons" of the NJPDES-DGW Permit. In accordance with Module III A.3.iii, Page III-5 of the EPA HSWA Permit, EPA will be copied on all submissions of groundwater data required by the NJPDES-DGW Permit.

12. Drum Storage Area

A. History and Prior Submittals

The Drum Storage Area is a RCRA regulated unit which was closed in August, 1990 in accordance with applicable regulations and closure certification was submitted. The new concrete pad for the drum storage area was installed in 1986. This closure did not entail the removal of soils from the area. Borings of the soils taken after installation of the new concrete pad showed levels below current New Jersey soil clean-up standards. Detailed studies of the soils and groundwater affected by releases from the Drum Storage Area ~~have been~~ were undertaken and ~~have been~~ were incorporated in the design of a groundwater remediation system. The release from the drum storage area, which occurred between 1964 and 1986, is estimated at less than 100 pounds to the groundwater based on groundwater

concentrations of TCE in the plume. Both EPA and NJDEPE have approved these reports and specifications of the remediation system which became operable in January 1992. These reports and specifications are entitled "Groundwater Remediation Design Report" dated August 1990, "Addendum To August 1990 Groundwater Remediation Design Report," dated October 1991, "Groundwater Recharge Pilot Study Report, Lenox China Facility, Pomona, New Jersey" dated August 1991, and "Technical Specifications, Groundwater Remediation System," dated September 1991. In addition, by letter of December 10, 1992, a report entitled "Groundwater Corrective Action System Semi-Annual Report January-June 1992" was submitted to EPA and NJDEPE. This report details the results accomplished by the system.

B. Further Investigations and Corrective Actions

Lenox believes these reports satisfy the requirement for a full RFI as required by Module III A.3.ii, Page III-5 of the EPA HSWA Permit. In addition, the soil investigations required by Part VI-DGW, Page 5 of 7, of the NJPDES-DGW Permit have been performed and are detailed in the August, 1990 above-referenced report. Consequently, no further investigations are required and the corrective actions currently underway are sufficient to remediate the results of any release from the SWMU.

14. Two Tanks (Neutralization)

A. History

As previously stated, wastewaters containing lead were directed to a treatment facility that was placed into operation in 1987. The treatment facility effluent is held in two tanks, which were installed in 1991, prior to discharge to the ACUA sanitary system. The location of these two tanks outside of the manufacturing building is shown on Figure 2. These two aboveground tanks, which are constructed of fiberglass and placed on a concrete pad, are each of 3,750 gallons capacity, having dimensions of 8 feet diameter by 10 feet high. Module II, B., Page II-1 of the EPA HSWA Permit, incorrectly identifies these two tanks as used for "pH balance". In actuality, these two tanks merely store the treated wastewater prior to a final check for lead concentration before discharging to the ACUA sanitary system.

B. Additional Information

Appendix H contains the lead concentration of the wastewater that was held in these two tanks prior to discharge to the ACUA sanitary system. As shown by these lead

concentrations, the tanks never contained a hazardous waste due to the fact that the lead levels never exceeded 5 mg/l (the threshold for a characteristically hazardous waste for lead). Further, these tanks never contained a listed hazardous waste. The tanks are regularly inspected for leakage and no leaks have ever occurred.

C. Further Investigations and Corrective Actions

The above-described information completely satisfies the requirement for preliminary information as required by Module III A.3.v, Page III-5 of the EPA HSWA Permit. Further, this information demonstrates that this SWMU, either individually or in combination with other SWMU's at the site, is not a source of contaminant release. Consequently, no further actions for this SWMU are required.

15. Filter Press

A. History

A Filter Press is utilized in the lead treatment system to remove glaze sludge from the wastewaters containing lead generated in the manufacturing process. The sludge from the Filter Press is sent off-site to a TSD facility under hazardous waste manifest for further treatment and disposal. This cast iron Filter Press, which has 29 plates and frames 18-1/2 inches square with a 1 inch cavity, is located within the manufacturing building as shown on Figure 2 and occupies an area of 5 feet by 2 feet. It is housed in a room with concrete flooring with a drainage system that completely captures any leakage or spillage. Leakage or spillage is directed back through the Filter Press. This system was installed in 1987 and has been operating continually since that time.

B. Further Investigations and Corrective Actions

The above-described information completely satisfies the requirement for preliminary information as required by Module III A.3.v, Page III-5 of the EPA HSWA Permit. Further, this SWMU, either individually or in combination with other SWMU's at the site, is not a source of contaminant release. This SWMU is housed entirely within a concrete-floored building with proper containment. Consequently, no further actions for this SWMU are required.

Specific Information Concerning Area of Concern

13. Area Between Monitoring Well #10 and Aloe Street

A. History and Prior Submittals

Lenox submitted to both the EPA and NJDEPE a detailed report entitled "Supplemental Information, Solid Waste Management Units, Lenox China, Pomona, New Jersey" dated September, 1990 that provided historical information and the results of soil sampling and waste characterization for this Area of Concern. Information contained in this report, specifically Item No. 2, a "Letter Report, Potential Solid Waste Management Unit Between Well No. 10 and Aloe Street at Lenox China, Pomona, New Jersey" dated September 19, 1990, prepared by Earth Sciences Consultants, Inc., details information collected at that time on this SWMU. This information delineates the vertical and horizontal extent of waste placement in this Area of Concern. It is estimated that waste was deposited over an area of approximately 0.9 acres and has a volume of approximately 786 cubic yards.

B. Further Investigations and Corrective Actions

The above-referenced Report prepared by Earth Sciences Consultants, Inc. correctly identifies the extent of waste placement in this Area of Concern. The Report recommends a discussion with EPA and the NJDEPE to determine a future course of action.

Three shallow monitoring wells were installed along the Aloe Street property boundary of the Lenox facility in 1991 for the purpose of determining whether this Area of Concern had contributed lead to the groundwater. A Letter Report was prepared by Geraghty & Miller, Inc. dated December 17, 1991 detailing the installation of these wells and the results of subsequent sampling and analysis. This Report~~, which~~ is contained in Appendix I~~, indicates lead had not impacted groundwater quality in these wells~~. Filtered samples from these monitoring wells showed lead at non-detect levels while unfiltered samples showed lead at concentrations ranging from 0.016 to 0.21 milligrams per liter. At least two rounds of unfiltered groundwater samples of Wells MW-72, MW-73 and MW-74 will be performed to demonstrate any impact of this SWMU on the groundwater.

Subsequent conversation with NJDEPE personnel indicated the possibility of no further action for this SWMU due to the above-referenced monitoring well data, the limited nature and extent of waste placement and the existence of mature trees and vegetative cover.